California Regional Water Quality Control Board
San Francisco Bay Region

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ALAMEDA POINT
SSIC NO. 5090.3

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Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

Date: DEC 1 2 2006
File: 2199.9285(EWS)

Department of the Navy
Base Realignment and Closure Program Management Office West
ATTN: Thomas L. Macchiarella
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

Subject: Comments on the Draft Remedial Investigation Report for Site 32, Alameda Point, Alameda

Dear Mr. Macchiarella:

Upon review of the *Draft Remedial Investigation Report, IR Site 32, Northwestern Ordnance Storage Area, Alameda Point, Alameda, California*, dated September 2006 (Draft RI Report) we have the following comments. In addition, our staff biologist, Ms. Agnes Farres, commented on the ecological risk assessment sections of the report. Her comments are included in the letter as an attached memo.

#	Page	Section	Comments
S1	ES-4	Exec Summary	**Groundwater - last sentence** - comparison of groundwater data with surface water criteria (CTR) is needed due to the proximity of the site with the Oakland Inner Harbor, and hence should not be considered overly conservative. Please revise this sentence.
S2	ES-5	Exec Summary	**Third Paragraph - last sentence** – This paragraph states that "Concentrations [of gross alpha, radium-226, and radium-228] reported in groundwater samples at IR Site 32 are generally similar to or lower than those reported at adjacent IR Site 1 where it was concluded that the source of the reported uranium isotopes and potassium-40 is natural rather than due to man-made depleted or enriched materials." Please clearly specify that radiological contamination due to Radium is not necessarily naturally occurring at Site 1. Page 2-9 of the Draft TCRA Work Plan for Sites 1, 2, and 32 (Dated 10/11/06), states that "... it was not possible to determine if the source of radium is natural or contamination (Shaw Environmental & Infrastructure, Inc., 2004)."
S3	ES-10	Exec Summary	**Conclusions bullet list - 6th Bullet** - Please specify which SVOC exceeded criteria and include the sample location.
S4	ES-10	Exec Summary	**Second to last paragraph** - Risks associated with Site 32 excluding background risks is presented here. Please also briefly summarize risks associated with Site 32 including background risks.

#	Page	Section	Comments
S5	Figure 1-6		Plumes for 1,2-DCE and VC look mostly undefined. Please confirm that this data gap was addressed upon completing the OU-1 and OU-2 Data Gaps Sampling effort.
S6	2-3	2.4	**Surface Water Drainage System and Tides - First Paragraph -** The final remedy selected needs to be protective of the seasonal wetland identified. Any future activities that may impact this seasonal wetland will need to be addressed in a wetlands mitigation plan.
S7	4-7	4.1.3	**Nature and Extent of Soil contamination - Second Paragraph -** Napthalene is mentioned as a chemical of interest in this introduction paragraph, but is not discussed in related sections 4.1.3.1 - 4.1.3.6. If Napthalene is a chemical of interest, please include a discussion of why in the appropriate section.
S8	4-12	4.1.3.6	**Summary of Nature and Extent of Contaminants in Soil - Top of page -** in Section 4.1.3.1, PCE and TCE are mentioned as detected VOCs, whereas in this section, only TCE remains as a chemical of concern. Please clearly specify why PCE was not included as a chemical of concern.
S9	4-13	4.1.4.3	**Previous Petroleum Hydrocarbon Investigations -** As TPH compounds were detected at the UST and NAS GAP site upgradient of IR Site 32, please include discussion that clarifies if and how these areas will be addressed by the TPH program. Also address in Section 4.2.4 (Pg 4-31) and 7.1.2 (Pg. 7-3).
S10	Figure 4-3		The way analytical results are presented leaves it unclear whether non-detected results had detection limits above or below screening criteria. Please be clear when detection limits are above screening levels. When this is the case, a non-detect result could still exhibit a potential risk.
S11	Figure 4-9		Plume shape for Cis 1,2-DCE looks potentially indicative of dilution with sea water as it migrates towards Oakland Inner Harbor. Please include a discussion regarding the potential for tidal influence at shoreline wells to dilute measured values of contaminants.
S12	Figure 4-10		The VC plume looks laterally undefined to the west of the site. Please include a discussion of groundwater samples taken at neighboring IR Site 1 that may indicate if contamination extends into IR Site 1.
S13	Figure 5-1		Please include storm sewer lines and other potential preferential pathways in the conceptual model.
S14	7-3	7.1.2	**Groundwater - Second to last paragraph** – The Water Board believes that, due to the close proximity of the site to the Oakland Inner Harbor and the potential for freshwater replenishment to the Harbor, CTR criteria are applicable and should be considered. Please revise the document to ensure that CTR criteria are considered.

Please contact me at (510) 622-2355 or email ersimon@waterboards.ca.gov if you have any questions.

Sincerely,

Erich Simon
Project Manager

Attachments:

12/07/2006 Memo – *Comments on Ecological Risk Assessment in the Draft Remedial Investigation Report IR Site 32, Northwestern Ordnance Storage Area, Alameda Point, Alameda.*

CC (via US Mail and email):

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Arnold Schwarzenegger
Governor

TO: Erich Simon
Project Manager
Alameda Point

FROM: Agnes Farres
Environmental Scientist
Groundwater Protection Division

DATE: December 7, 2006

SUBJECT: Comments on Ecological Risk Assessment in the Draft Remedial Investigation Report IR Site 32, Northwestern Ordnance Storage Area, Alameda Point, Alameda

Upon review of the subject report, I have the following comments. If you have any questions, you can contact me via phone (510) 622-2401 or email at AFarres@waterboards.ca.gov.

General Comments:

1. Discussions of ecological risk repeatedly state that only a small portion of IR Site 32 is a seasonal wetland, suggesting that only a very small seasonal wetland is being considered in the ERA. However, it is important to note that the seasonal wetland located in the northwestern corner of Site 32 is part of a much larger seasonal wetland complex. Please revise discussions on the seasonal wetland to note this. In addition, any ecological risk will potentially impact the larger seasonal wetland complex and its associated plants and wildlife and should be considered during this risk evaluation.

2. A discussion of chemical fate in the environment should be included in Section 6. This discussion should include a brief summary of the propensity for physical and biological degradation of contaminants, the potential formation of daughter products, and the likelihood that chemical constituents will be readily metabolized by organisms.

3. An ecotoxicity evaluation of potential contaminants at the site should also be included. This information will be helpful in understanding potential exposure pathways and choosing appropriate measurement endpoints. This information will also highlight whether a constituent would be more toxic to a particular group of organisms (e.g. mammals vs.birds) and what its potential toxic effects are (e.g. growth reduction vs. reproductive effects).

4. At the first mention of a plant or animal species throughout Section 6, the Latin name should be included as well as its listed status (e.g. Federally Threatened, State Endangered, California Species of Special Concern) if applicable.

5. Refined risk estimations were prepared for terrestrial wildlife, aquatic wildlife, and aquatic life receptors. To facilitate a more complete risk evaluation, specify which species had HQs exceeding 1.

6. The subject report repeatedly states that inorganic COPECs with concentrations not statistically higher than the Alameda Point background concentrations were eliminated from further evaluation. Revise these statements to clarify that while these COPECs will be eliminated from further evaluation in the risk assessment, they will be considered during risk characterization.

7. To facilitate risk evaluation, figures should be included showing the location and distribution of COPECs with HQs exceeding 1 evaluated in Step 3a.

8. We do not concur with the recommendation that no further investigation or assessment of soil and groundwater is warranted for Site 32 based on the information provided. In the risk characterization using refined exposure estimates (Step 3a), the Navy argues that all retained COPECs with HQs exceeding 1 do not warrant further evaluation and likely do not pose unacceptable ecological risk because their HQs do not exceed 10. Provide a rationale for using an HQ of 10 as an indicator of unacceptable ecological risk, rather than an HQ of 1.

   In addition, the cumulative effects of COPECs have not been adequately evaluated in the risk characterization. The cumulative effects of constituents that were eliminated because concentrations were not statistically different from background concentrations should be considered in the risk characterization. Also, ten constituents (mercury, selenium, TCE, DDT, cadmium, cobalt, fluoranthene, pyrene, radium-226 and radium-228) had HQs exceeding 1; cadmium has an HQ of 30, a 50% increase compared to background concentrations. Unless the Navy can demonstrate that potential ecological receptors will only be exposed to the fraction of concentrations greater than background, and that potential ecological receptors will not be exposed to more than one constituent, then cumulative exposure should be evaluated.

Specific Comments:

1. ES Tables: A table of the Human Health Risk Assessment Summary is included in the ES (Table ES-1). It would be helpful if a similar summary of the Ecological Risk Assessment was also included in a table.

2. Section 6.2.1.3: Several listed species may occur at Site 32. Specify which species might occur at Site 32, their listed status (e.g. state endangered, federally threatened), and the likelihood of their occurrence.

3. Pg. 6-15: The third paragraph states that if the potential future use scenario of a golf course and park facilities were implemented, potential risk to ecological receptors would likely be reduced. However, because future land uses tend to be uncertain, risk should be mitigated to be protective of all potential future land use scenarios. Provide more information demonstrating the certainty of the golf course/park scenario, such as a reference to a Specific Plan.

4. Section 6.3.1: The refined EPCs for soil COPECs were recalculated using the 95% UCLs representative of average exposures at Site 32. An explanation should be provided to justify the use of the 95% UCLs. For example, the spatial distribution of COPECs with HQs exceeding 1 need to be considered when calculating refined EPCs. If hot spots are present, the potential effect of these hot spots could be diluted by using the 95% UCL. Discuss whether or not hot spots for the COPECs are present. If hot spots are present, the calculations for the refined EPCs should be revised.

5. Section 6.3.2 (and Section L6): This section states that refined risk estimations were prepared for terrestrial wildlife, aquatic wildlife, and aquatic life receptors using refined exposure estimates. To facilitate risk evaluation, provide a more detailed explanation of how the refined exposure estimates were developed. Include information on assessment endpoints (e.g. reproductive effects, growth reduction) and measurement endpoints (effects on a sensitive species or a life stage). For example, the refined exposure estimate for the Alameda song sparrow was based on the mean body weight of adult males and females. If the assessment endpoint is reproduction, it might be more appropriate to use the mean body weight of adult females only.

6. Section 6.3.2.2 states that PCE has an HQ of 3 for terrestrial wildlife receptors, while Section L7.2 states that TCE has an HQ of 3 for terrestrial wildlife receptors. Please correct this contradiction.

7. Section L1.2.2: The second paragraph states that Santa Cruz tarplant, Kellogg's horkelia, Contra Costa goldfields and Adobe sanicle have not been observed in the area for many years. Specify how many years have passed since these species have been observed in the area and the size of the area being considered. If any of these species occur within five miles of Alameda Point, dispersal onto Alameda Point is possible.

8. Section L1.2.2: The second paragraph concludes that special status plant species are unlikely to occur at Alameda Point and that none were reported in vegetation surveys conducted in 1995 and 1997. If any of these species have been known to occur on Alameda Point in the past, more justification is needed to support this conclusion, such as

lack of suitable habitat or the length of time since the species was last observed on site. In addition, enough time has passed since the last vegetation survey conducted (10 years ago) that habitat and population changes may have occurred. If there is potential for any of these species to occur on site, new information based on additional vegetation surveys may be required.

9. Section L1.2.2: The fifth paragraph concludes that the dusky-footed woodrat and Alameda Island mole, two California Species of Special Concern, are unlikely to occur at Site 32 based on infrequent sightings in the past. If they have been found on Alameda Point in the past, it is possible that they will occur there again. Provide more information on how often they have been observed on site, when these species were last observed on site, how many individuals were observed, and the date of the last surveys conducted for these species. If there is a potential for occurrence of these species, they may need to be considered in determining the most sensitive receptor for the ecological risk assessment.

10. Section L1.2.2; The sixth paragraph states that burrowing owls, a California Species of Special Concern, occur in the grassland and scrub habitat in the vicinity of Site 32. Due to the presence of ground squirrels and grassland habitat on Site 32, it is possible that burrowing owls occur within Site 32 as well. Provide more information on the possible occurrence of burrowing owls on Site 32 such as survey dates and results. If their occurrence is likely, explain why the inhalation exposure pathway was not considered in the risk assessment.